National Institute of Environmental Health Sciences

Adapting to climate change: Reducing water-related risks in Europe - EU policy and research considerations

Author(s): Quevauviller P
Year: 2011
Journal: Environmental Science & Policy. 14 (7): 722-729

Abstract:

Climate change impacts on the hydrological cycle, e.g. leading to changes of precipitation patterns, have been observed over several decades. Higher water temperatures and changes in extremes hydrometeorological events (including floods and droughts) are likely to exacerbate different types of pressures on water resources with possible negative impacts on ecosystems and human health. In addition, sea-level rise is expected to extend areas of salinisation of groundwater and estuaries, resulting in a decrease of freshwater availability for humans and ecosystems in coastal areas. Furthermore, climate-related changes in water quantity and quality are expected to affect food availability, water access and utilisation, especially in arid and semi-arid areas, as well as the operation of water infrastructure (e.g. hydropower, flood defences, and irrigation systems). This paper serves as an introduction to the special issue of Environment Science & Policy dealing with climate change impacts on water-related disasters. It provides a brief background about relevant EU water policies and examples of EU-funded research trends which illustrate on-going efforts to improve understanding and modelling of climate changes related to the hydrological cycles at scales that are relevant to decision making (possibly linked to policy). © 2011 Elsevier Ltd.

Source: http://dx.doi.org/10.1016/j.envsci.2011.02.008

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Policymaker, Researcher

Exposure : ☑

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Extreme Weather Event, Food/Water Quality, Food/Water Security, Food/Water

Security, Precipitation, Temperature

Extreme Weather Event: Drought, Flooding

Food/Water Security: Food Access/Distribution

Geographic Feature:

resource focuses on specific type of geography

Freshwater, Ocean/Coastal

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Review

Resilience:

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content